Executive Committee for Highway Safety
Lane Departure Working Group
Meeting #12, Minutes / Summary
Wednesday March 21, 2007 – Mtg. #12

Location:
Transportation Management Center Large Conference Room, 8:30 AM – 12:00 PM

Attendance:

Steve Varnedoe	Bucky Galloway	Charlie Zegeer - UNC HSRC	David Harris
Tony Wyatt	Kevin Lacy	Brad Hibbs - FHWA	Stuart Bourne
Cliff Braam	David Phipps	Delbert Roddenberry	
Brian Mayhew	David Wasserman	Terry Hopkins	
Reuben Moore	Fred Rosendahl	Roger Thomas	

Summary:

Item 1 Introduction & Guidance:
Chairman Varnedoe welcomed the workgroup and introduced two new team members: David Phipps from Traffic Engineering's Capital Region, and Delbert Roddenberry from Operations.

Following group introductions Chairman Varnedoe reviewed the performance based tiered business model and the importance of:

- Improving Transportation Safety (reducing fatal crash rates)
- Program Delivery – on time, within budget, well scoped, and high quality
- Mobility (Reducing Congestion is now one of four FHWA Focus Areas & is important to safety efforts also)
- Infrastructure Health

North Carolina's Statewide Tier (Officially the Strategic Highway Corridors) of 5,400 miles is estimated to carry almost 50% of the state's vehicular traffic (VMT).

Interesting fact shared was while North Carolina and Texas have similar magnitudes (centerline mileages) of state maintained roads (Texas approximately 80,000; North Carolina approximately 79,000), Texas has five (5) times more Primary route mileage than North Carolina does.

Item 2 WORK Team Reports:
Tony Wyatt provided some background into the evolution of the Forgiving Roadside safety concept. Early efforts were directed at just the road travelway and if you left the travelway you were "on your own." Following national level focus highway safety evolved to the approach that someone should not have to lose their life because of an encroachment off the travelway – and thus the need for and pursuit of a forgiving roadside environment. The Lane Departure Workgroup has utilized the following approach in establishing the four (4) initial work teams:

Keeping the Vehicle on the Road (Positive Guidance Team)
Providing a Clear Recovery Area/Forgiving Roadside (Clear & Safe Roadside Team)
Addressing Fixed Roadside Objects (Initial Team Utility Poles)
Establishing Tier Based Safety Performance Measures & Targets

Work Team Reports

Utility Pole(Cliff Braam & Charlie Zegeer):

Positive Guidance (Stuart Bourne):

Clear and Safe Roadside (David Harris): CZIP
http://www.dot.state.sc.us/Events/maintenance/downloads/Tuesday/D_Lee_NCDOT_Clear_Zone_Improvement_Prog.pdf

Safety Performance Measures and Targets by System Tier (Tony Wyatt): Draft Attached

Strategic Highway Corridors and the Statewide Transportation Tier (David Wasserman)
http://www.ncdot.org/doh/preconstruct/tpb/SHC/overview/

Secondary Road Safety Program – Delbert Roddenberry

Item 3 (Lane Departure Team Exercise)

Risk Assessment and Countermeasure/Strategy Ranking Exercise – facilitated by Brad Hibbs -FHWA

Statewide Tier (Top 5,400 System Miles) Risk Identification

- Fixed Objects
- Incidents and Secondary Events
- Overgrowth of Vegetation and Trees
- Alignment
- Wet weather – hydroplane – flat spots / pavement surface (long run outs and wide pavement areas)
- Cross Median
- Edge Drop Offs / Shoulder Crumble / Rutting
- Conflict Points: driveways, intersections, interchanges, crossovers
- Lack of Access Management
- Narrow Lanes and Shoulders
- Unprotected Bridge Approaches/Culverts
- Cross Drain Pipes / Inlets
- Driveway Pipes – exposed ends
- Pipe Under Road – hydraulic scour
- Congestion, Capacity, Traffic Friction & Speed Differential
- Night Time and Wet Weather Visibility & Navigation – signs and pavement markings

STRATEGY/COUNTERMEASURE IDENTIFICATION

Clear Zone Management
- Safety Appurtenances & Barrier System Improvements
- Invasive Vegetation
- Utilities / Trees / fixed roadside objects
- Drainage Structures

Side Slopes

System Modernization – widen deficient lanes and shoulders
- Improve shoulder standards & Modernize to Current Standard
- Address Shoulder transitions and rut points

Design with Maintenance (and Safety) in Mind
- Lower risk to NCDOT Maint staff, workers, responders, & public
- Grade Cross Slopes

Access Management
Intersections – leftovers
Incident Management and ROW Parking Prohibition & Enforcment
Positive Guidance
Rumble strip / Rumble stripe
Delineation
Signing and Pavement Markings
Surface Drainage and Improved Digital Terrain mapping Surface Survey/Scan Capabilities (Charlie Brown)
Systems Operations
Formalized ROAD SAFETY AUDITS, ASSESSMENTS & REVIEWS
Geometric Improvements

LANE DEPARTURE MEETING 12 ACTION SUMMARY

Action	Assignment	Due Date
Refine Clear and Safe Recovery Area (CZIP) Strategy for Presentation to Executive Committee for Highway Safety	Eatmon/Harris	April 9,2007 (to electronically submit to Steve Varnedoe and Tony Wyatt)
Produce Lane Departure Program Report/ Work Plan / Status	Wyatt	First Draft Target April 30, 2007
Forward E-Mail on VMT (%) by Tier/System	Lacy	Say April 1, 2007
Recruit/Add Daniel Keel to Utility Pole / Fixed Roadside Objects Team	Wyatt	March 22, 2007
Volunteer Ron King into Positive Guidance Work Team Ron to Co-Chair Effort with SB	Wyatt	April 1, 2007
Forward Most Current DRAFT Pavement Marking Guidelines	Bourne	Say April 1, 2007

Meeting Adjourned shortly after 12:00 PM on March 21, 2007
Future Meetings TBD on an “only as needed” basis

	Interstate	US	NC	Primary	SR	NonSystem
Total Crash Rate (2003-2005)	101.25	220.69	228.15	184.64	407.09	390.10
Existing Fatal Crash Rate	**0.61**	**1.47**	**1.78**	**1.28**	**2.69**	**0.90**
Fatal crashes (3 YR)	335.00	1025.00	839.00	2199.00	1729.00	230.00
Fatals per YR AVG	111.67	341.67	279.67	**733.00**	**576.33**	76.67
Crashes	55392.00	153720.00	107589.00	316701.00	261872.00	99204.00
Miles of Road	1038.00	5507.00	8038.00	14583.00	63856.00	23224.00
Centerline Miles PER Fatal Crash per Year	**9.30**	16.12	28.74	19.89	110.80	302.92
Severity Index	4.27	5.07	**5.46**	5.06	5.45	4.06
DENSITY Fatals per Mile of Road per Year	0.11	0.06	0.03	0.05	0.01	0.00
TARGETs Fatal Crash Rate Goals						
YEAR 1	0.57	1.42	1.75		2.64	
YEAR 2	0.54	1.35	1.71		2.59	
YEAR 3	0.52	1.30	1.68		2.54	
Target Year 4 Fatal Crash Rate	**0.50**	**1.25**	**1.65**		**2.50**	
Projected Fatals per Year with TARGET	92.00	291.00	260.00		536.00	
Net REDUX in FATAL CRASHES (10%)	20.00	51.00	20.00		40.00	